Summary of Project Process and Alternatives Evaluation

The SR 20 North Whidbey Island Access Feasibility Study was initiated to explore possible options to provide additional vehicular access to North Whidbey Island. The most recent update to the Island County Comprehensive Plan indicated that future traffic volumes at the SR 20 Deception Pass Bridge would overload the existing bridge capacity during the peak period with traffic that is approximately double current values. The current route for SR 20 runs through Deception Pass State Park and the Deception Pass/Canoe Pass Bridges are listed as historic landmarks. As such, any widening of the SR 20 facility at the north end of Whidbey Island would be constrained by 4F regulations regarding impacts to parks and significant cultural resources. WSDOT and Island County embarked on this study to identify any feasible alternatives that would connect SR 20 to Interstate 5 to resolve the future traffic challenges.

The outcome from this study will be incorporated into the next Comprehensive Plan update for each of the affected counties and areas, and any new facility would be included as a toll facility. With respect to concurrency requirements, there is no commitment on the part of the State to meet concurrency requirements on SR 20.

The purpose of this summary is to provide a guide to the work accomplished by the study team, including consultant efforts, preceding the loss of funding for the study as a result of the November 1999 election and passage of Initiative 695. The project was initiated in August 1998 and is close to conclusion with draft/pending recommendations regarding alternative feasibility that were developed by the Technical Steering Committee in November 1999. Attached is a set of three appendices that include copies of the products of the study for both process and evaluation of alternatives.

Project Team

Jean Mabry and Mark Sinden of WSDOT Northwest Region Mount Baker Planning District staff have provided project management and guidance through the project in conjunction with Jerry Schutz, Planning Manager and Bob Josephson, Mount Baker District Manager. The consultant team supporting this planning effort consisted of Parametrix, Inc. as prime consultant with five sub-consultants to provide expertise as follows: HWA Geosciences for geotechnical and soils engineering, Larson Anthropological Archaeological Services for investigation of cultural resources, Lin & Associates for structural engineering and bridge concepts, McClure Consulting for public involvement and agency coordination, and Parsons Brinckerhoff for ferry planning and financial analyses. Katherine Casseday was consultant project manager. An organization chart of the consultant team is attached for reference.

Goals and Objectives

The primary goal of the SR 20 North Whidbey Island Access Feasibility Study was to determine the **feasibility** of increasing vehicular capacity by ferry and bridge access alternatives from North Whidbey Island to the mainland and I-5 corridor. Key tasks of the study process were:

1. To evaluate potential locations for:
    - New bridge connection from North Whidbey Island to the I-5 corridor
    - Additional vehicular ferry service/facility between Whidbey Island and the mainland/Stanwood or Camano Island.

2. To identify feasible alternatives from the potential locations for the expansion of the existing transportation network serving on-/off-island travel from Whidbey Island.
3. To provide feasibility analysis for further consideration in the update of local and regional plans.

The major objectives of this study were:

A. To identify potential and feasible sites for bridge construction from North Whidbey Island to Fidalgo Island, to Fir Island, to Camano Island, and to the mainland.

B. To identify possible construction types for bridge alternatives.

C. To identify feasible locations for ferry system terminals for ferry alternatives.

D. To estimate vehicular travel demand for new access connections from North Whidbey Island, for either roadway or ferry network additions.

E. To provide an assessment of traffic impacts expected from addition of either bridge connection or ferry connection to and from North Whidbey Island.

F. To identify environmental, land use, economic and social aspects related to construction of either bridge or ferry systems connections.

G. To provide planning level construction cost estimates for feasible access alternatives.

The key objective of this feasibility study was to determine if there is a project worth spending $7.5 million. Everything that doesn't fit into the capacity constrained expansion fits into the RTP update. Passenger-only ferry service will be addressed in the Island County Least Cost Planning (LCP) effort. Alternatives to any vehicular capacity expansion fit into the LCP study. The feasibility study started out with a broad-brush regional planning process that identified the need for capacity improvements, the next step was the feasibility study to narrow down the many alternatives to those which are feasible for construction. Then the environmental and design process would go forward to select a preferred alternative for capacity improvements.

It is important that the Least Cost Planning effort has been coordinated with this feasibility study. The two studies complement each other in effort, and the key is the term *complementary*. The LCP conclusions and recommendations were intended to be brought forward ahead of the feasibility study completion.

Committees

The Policy committee was originally envisioned as a decision making body. It became clear that the Policy Committee would be advisory to the three Policy Boards involved: Island County Sub-Regional Transportation Planning Organization Policy Board, Skagit County Sub-Regional Transportation Planning Organization Policy Board, and Snohomish County Tomorrow, a sub-regional policy board of the Puget Sound Regional Council. Both the technical committee members and the policy committee members need to return to their respective/parent bodies for direction and to provide feedback to the project team. Ultimately, the decision regarding the feasibility of alternatives for increased vehicular access to North Whidbey Island lies with the SIRTPO and the PSRC. The Policy Committee roster is included in Appendix B.

Through this study, the Technical Committee made recommendations to the Policy Committee, which made recommendations to the Policy Boards for actions and decisions. The Technical

Steering Committee met with the project team six times to provide input for the study process and decision-making guidance for the study work elements. Seven meetings were planned to occur at times appropriate with the study work elements. Six meetings were held covering the evaluation of alternatives and the development of draft/pending recommendations regarding feasibility of alternatives. The Technical Steering Committee roster is included in Appendix B.

Public Involvement

Public involvement efforts for the study revolved around two sets of open house meetings planned in conjunction with alternatives development and were planned to be a presentation of the results of analysis of alternatives. A set of three open house evening meetings were held in October 1998 coincident with open house meetings for the Island County Regional Transportation Plan Update. A survey of attendees was distributed to collect input on alternatives for evaluation for feasibility. Due to low attendance at the three open house meetings, questionnaires were distributed to a collection of more than fifty organizations to solicit input on possible alternatives for evaluation. This effort was a successful outreach activity resulting in a significant response and direction for the alternatives development stage of the study.

The second set of open house meetings would follow completion of a draft feasibility report, however the effort for a draft report and completion of the study has been truncated in consequence of the passage of Initiative 695 and restriction of funds for this study.

Project Sequence and Process

The study was organized around a series of technical steering committee and policy committee meetings, starting with identification of project purpose, goals and objectives, baseline assumptions, identification of alternatives, preliminary screening, and evaluation of feasibility. What follows is a sequential review of the study with note of key topics of discussion, analysis and decisions through the project leading to the presentation of feasibility evaluation and preliminary conclusions of feasibility for each alternative.

Project Agency Scoping Meeting

The combined technical committee and policy committee memberships for the project met in September, 1998 to discuss the overall project scope, the goals and objectives of the project and to start a discussion of possible alternatives for consideration through this study process. Meeting notes are included in Appendix B.

A summary of the public involvement effort, public outreach and the committee process, decision-making techniques and overall approach is forthcoming from McClure Consulting and will be provided to complete the following three sections.

Public Open House Meetings

Public Outreach Effort

Technical and Policy Committee Meetings

Initial Identification of Bridge and Ferry Options

A field review and review of topography and roadway connections revealed a collection of possible locations for bridge and ferry landings on Whidbey Island, Camano Island and the mainland in Skagit and Snohomish Counties. These possible locations were combined with input from the public via the public open house and public outreach effort to create a collection of connection options for initial screening by the Technical Steering Committee and the Policy Committee for the project. Initial screening was performed at Technical Committee Meeting #2 using the five criteria for feasibility (Social, Cost/Financial, Land Use/Economic Development, Environmental and Transportation Performance) and reflecting a general knowledge of the study area provided by both the consulting team and the collective Technical Steering Committee knowledge. This initial screening was a qualitative assessment, with several options eliminated due to social or cultural constraints and transportation performance. A coverage of the initial screening process is detailed in the meeting notes for Technical Committee Meeting #2.

Description of Alternatives for Feasibility Evaluation

Alternative 1: Bridge from vicinity of Dugualla Bay to vicinity of La Conner

Roadway improvements would extend from SR 20 along Frostad Road to Dugualla Bay, a 4.8 mile bridge would cross Skagit Bay between Goat and Ika Islands and land near the north edge of the North Fork Skagit River delta. The route would then continue along Dodge Valley Road, Best/Chilberg Road, to cross the North Fork Skagit River south to Fir Island Road, and follow Fir Island Road through Conway to I-5.

Alternative 2: Bridge from north Strawberry Point to Conway via Fir Island Road

Roadway improvements would extend from SR 20 along Fakkema Road to Silver Lake Road, or from SR 20 along Crescent Harbor Road to Silver Lake Road, a 4.0 mile bridge would cross Skagit Bay from Strawberry Point to a landing at Fir Island Road, then cross Fir Island to Conway at I-5.

Alternative 3: Bridge from Strawberry Point to vicinity north of Stanwood

East from SR 20 on new alignment to Crescent Harbor Road, follow Crescent Harbor Road to new alignment to Strawberry Point Road, then a 6-mile bridge over Skagit Bay heading southeast to SR 530 on new alignment, and east along 300th Street NW to I-5 interchange.

Alternative 4: Ferry Operation to North Whidbey Island

A ferry run from Whidbey Island to a terminal located at the west end of a bridge extending out into Skagit Bay. The ferry would depart from a new ferry terminal located near Strawberry Point, Oak Harbor, or downtown Coupeville. The eastside ferry terminal would be located on a 5.4-mile bridge/dock aligned with an 0.8-mile extension of 300th Street NW in the vicinity of North Stanwood.

Feasibility Assessment of Alternatives

Criteria and Measures of Feasibility (MOF) were selected for this project by the Technical Steering Committee. This process is detailed in meeting notes for Technical Committee Meeting #3. Listed below are descriptions of the methodologies used in evaluating the feasibility of the alternatives. A summary of the feasibility assessment and evaluation by criteria and measurement is attached.

Methodology

Methodology for assessing the feasibility of each alternative was developed to address each of the five criteria for feasibility. Working closely with the project Technical Steering Committee, the project team identified measures within each criteria to help clarify if alternative is feasible and worthy of further review or evaluation.

Community Impacts

Three MOF were developed to evaluate community social impacts: S1-impacts to cultural resources; S2-impacts to residences; and S3-traffic impacts on local neighborhoods. Potential impacts on cultural resources were assessed by conducting an inventory of the type and significance of historic and archaeological sites within ½ mile of each proposed alternative alignment. The inventory was conducted by Larson Anthropological Services Limited and summarized in a cultural resources technical report (Appendix C).

Potential impacts on residences were assessed by estimating the number of residences within ½ mile of each proposed alternative alignment using 1999 aerial photographs. Potential traffic impacts on existing neighborhoods were assessed by determining likely changes in roadway classification, non-arterial to arterial conversions, changes in speed limits, and changes in side street or property access that could result from the proposed alternatives.

The results of the evaluation are described in the *Social Impacts* by Parametrix (Appendix C), and summarized in the Summary of Technical Measures Table of this summary.

Land Use and Economic Impacts

Five MOF were developed to evaluate land use and economic development impacts:

- LU1-amount of agricultural land affected by right-of-way (ROW) acquisition.
- LU2-amount of timber and mineral resource land affected by ROW.
- EH3-ROW within shoreline jurisdiction.
- ED1-potential number of farms and businesses affected.
- ED2-potential impacts to fish and shellfish harvesting.

County land use and zoning maps were used to estimate the amount of designated agricultural land and the amount of designated timber and mineral resource lands that would need to be acquired for roadway ROW. Location of ROW within areas under shoreline jurisdiction were determined by review of county shoreline master plan maps.

Potential impacts on farms and businesses were assessed by estimating the number of farms and businesses within ½ mile of each proposed alternative alignment using 1995 aerial photographs. A site reconnaissance was conducted to verify the photograph counts.

Information regarding tribal and commercial fish and shellfish harvesting areas was obtained from several sources existing references and personal communications with Tribal and WDFW representatives.

The results of the evaluation are described in the *Land Use and Economic Development Analysis* by Parametrix (Appendix C).

Financial/Economic Performance
Three MOF were developed to assess alternative feasibility for financial and economic performance:

- FE1 Planning level construction cost estimate, including right of way and mitigation
- FE2 Annual operation and maintenance cost estimate
- FE 3 An assessment of funding potential, reflecting revenues from tolls and rate of return on private investment

Planning level construction, operations and maintenance cost estimates were developed for the three bridge alternatives and ferry operations alternatives considered for this project. Costs include the construction of bridge, the effective reconstruction of roadways connecting SR 20 to the bridge and to I-5, right of way through the corridor and intersection or interchange improvements at key locations. Please refer to the *Planning Level Cost Estimate* Technical Memorandum (Appendix C) for a more detailed description of the cost estimation parameters. Roadway construction costs were estimated using a baseline cost spreadsheet provided by WSDOT staff, reflecting the general terrain character of the routes and the adjacent land use (urban or rural) character along the alignments. Bridge construction cost estimates were developed by Lin & Associates and are described in the Bridge Analysis and Cost Estimates Technical Memorandum. Due to the length of the crossing, the bridge type would probably be a collection of 40-60' spans with low clearance through the Skagit Bay and mud flats area and longer spans to clear the shipping channel and deep water closer to Whidbey Island.

Capital and operating costs for ferry operations were developed by Parsons Brinckerhoff and are presented in the *Ferry Operations* Technical Memorandum for the project (Appendix C). There are several options for ferry operations, depending upon the location of the Whidbey Island terminal. The purpose of this study was to examine the feasibility of a ferry alternative, not the selection of specific ferry run.

An assessment of financial feasibility was provided by Parsons Brinckerhoff for each alternative using cost input, traffic forecast input and some assumptions for public funding, (Appendix C). Financial feasibility for a bridge connection to North Whidbey Island depends upon the ability to attract investors into a public-private

Natural Environmental Impacts
Six MOF were developed to evaluate wetland, wildlife, and fisheries impacts:

- EH1-Location and type of priority habitat affected.
- EH2- Threatened and endangered species affected.
- EC1-Wetland affected.
- EC2-Eelgrass beds affected.
- EC3-Floodplains affected.
- EC4-Relative geotechnical risk.

The proposed alternatives were overlaid on National Wetland Inventory (NWI), Priority Habitat Species maps obtained from Washington Department of Fish and Wildlife (WDFW) and the Puget Sound Environmental Atlas to identify wetland, wildlife and fish resources that potentially could be affected by each alternative. Existing resources within 0.5 mile of the roadway were identified with particular attention paid to those resources in the direct path of the proposed

right-of-way. Resources that could be affected by the project were grouped into two categories: those that would be affected by improvement of existing roads, and those that would be affected by new construction. Impacts of new construction would likely be more significant. The results of the evaluation are described in the *Summary of Wetland, Wildlife, and Fishery Resources* by Parametrix (Appendix C).

Floodplain mapping prepared by Federal Emergency Management Agency (FEMA) for Island, Skagit and Snohomish Counties was used to evaluate the amount of ROW within the 100-year floodplain for each alternative under consideration. The results of the evaluation are described in the *Environmental Issues-Floodplain Review* by Parametrix (Appendix C).

Geotechnical risk was evaluated based on review of surficial geologic maps of the project area, a seismotectonic map of the Puget Sound Region, and a site reconnaissance. The results of the evaluation are described in the *Geotechnical Feasibility and Concept Study* by HWA Geosciences Inc. (Appendix C).

Transportation Performance

Three MOF were developed to measure transportation performance:

- TP1 Average Travel Time, Oak Harbor to Mount Vernon
- TP2 Average Travel Time, Oak Harbor to Everett
- TP3 Level of Service

A travel-forecasting model was developed by WSDOT transportation planning staff for the three county area to provide traffic volume and travel time data for this feasibility analysis. Transportation feasibility was assessed using two key measures, future roadway level of service and future travel time savings. Roadway level of service was evaluated at significant arterials throughout the study area for year 2020 peak hour traffic assignments from the model output for each of the four alternatives. Travel time savings, compared with future no-action scenario, were identified for each of the alternatives for three origin and destination pairs: Oak Harbor to Mount Vernon, Oak Harbor to Everett and Oak Harbor to Anacortes. Travel time savings and improved peak hour level of service are both measures of the potential benefits associated with the alternatives being considered.

Model runs were provided for future no-action or baseline conditions, for future with each alternative without toll, and for each bridge alternative under two toll scenarios, a high and low toll value. Toll values of $3.50 and $5.00 per trip were estimated based on the expected amount of time saved using a new bridge in consideration of local wage rates and values of time. The Transportation Performance Technical Memorandum outlines both the methodology and results of the analysis for the alternatives (Appendix C).

Evaluation of MOF Criteria, by Alternative

Bridge from North Whidbey Island to LaConner Vicinity

A detailed summary of expected impacts and costs of this alternative is presented in *SUMMARY OF FEASIBILITY MEASURES, Bridge from North Whidbey Island to Vicinity of LaConner*, (Appendix C).

Planning Level Construction Cost Estimate: $321.1 million including roadways, bridge, right of ways, and traffic mitigation. Operations and Maintenance costs for the project are estimated to be $1.360 million annually. Project level rate of return would range from –1.1% (negative return) to 1.4%, which would not be attractive to investors.

While there are expected travel time benefits expected with this bridge alternative, this alternative appears to be fatally flawed with respect to potential environmental impacts. Significant impacts are expected with this alternative on Federally listed threatened and endangered species as follows:

- Two crossings of the North and South Forks of the Skagit River with known large populations of threatened chinook, proposed threatened bull trout, and candidate coho salmon would result from this alignment.
- Eleven bald eagle nests in four bald eagle territories are within 0.5 mile of the alignment.
- Three and one-half mile of estuarine intertidal habitat along the east side of Skagit Bay and in Dugualla Bay would be potentially affected by bridge development. These areas are recognized as important wintering and staging habitat for waterfowl, as rearing habitat for threatened chinook salmon, and as breeding/rearing habitat for herring, sand lance, and smelt.
- Of the 3.5 mile length of bridge in the intertidal area, approximately 0.2 mile length through eelgrass habitat, an important habitat critical for supporting several priority fish species and other marine life. Eelgrass beds are considered to be irreplaceable and avoidance is the recommended mitigation.

These impacts would present serious obstacles for obtaining approval by the US Fish and Wildlife Service and National Marine Fisheries Service.

- At least 20 emergent, shrub-scrub, and forested wetlands located on Fir Island are potentially affected. Several riparian wetland habitats along the rivers and streams could be affected. Adequate mitigation may be achieved through avoidance and minimization measures.
- All of the alignment along Fir Island Road lies within the 100-year floodplain, including the interchange at I-5. Portions of the alignment through Dodge Valley would be within the area of flood risk. Compensatory flood storage would need to be provided for all area lost due to the project.

These impacts would present serious obstacles for obtaining permits.

- Construction would occur in designated shoreline areas. The Shoreline Master Programs of Skagit and Island Counties stipulate that roadway construction shall be located away from shoreline areas whenever feasible.
- Bridge construction would result in substrate modification in existing eelgrass beds within Island County shoreline jurisdiction, which is ***prohibited*** under Island County Shoreline Use Requirements (Section 17.05.045).
- Construction would occur within Shorelines of Statewide Significance including the Skagit County marine shoreline, Whidbey Island marine shoreline and the North and South Forks of the Skagit River. Shorelines of Statewide Significance are given higher priority for protection and preservation than other designated shoreline areas.

Bridge from North Whidbey Island to Fir Island and Conway Vicinity

Detailed summary of expected impacts and costs of this alternative are presented in *SUMMARY OF FEASIBILITY MEASURES, Bridge from Strawberry Point on North Whidbey Island to Conway Area Via Fir Island,* (Appendix C).

Planning Level Construction Cost Estimate: $183.4 million including roadways, bridge, right of ways, and traffic mitigation. Operations and Maintenance costs for the project are estimated to be $1.098 million annually. Project level rate of return would return would range from 3.4% to 3.7%, which would not be attractive to investors.

While there are expected travel time benefits expected with this bridge alternative, this alternative appears to be fatally flawed with respect to potential environmental impacts. Significant impacts are expected with this alternative on Federally listed threatened and endangered species as follows:

- The South Fork of the Skagit River and one stream that support threatened chinook, proposed threatened bull trout, and candidate coho salmon populations would be crossed by this alignment.
- Up to 4 bald eagle nests in 2 bald eagle territories are with in the 0.5 mile of the alignment.
- Two and one-half mile of estuarine habitat in Skagit Bay would be potentially affected by the alignment. These areas are recognized as important wintering and staging habitat for waterfowl, rearing habitat for threatened chinook salmon, and as spawning/rearing habitat for herring, sand lance, and smelt.
- Of the 2.5 mile of estuarine habitat crossed by the bridge, approximately 1.5 miles are through eelgrass habitat; an important habitat critical for supporting several priority fish species and other marine life. Eelgrass beds are considered to be irreplaceable and avoidance is the recommended mitigation.

These impacts would present serious obstacles for obtaining approval by the US Fish and Wildlife Service and National Marine Fisheries Service.

- At least 16 forested, emergent, and scrub-shrub wetland areas and open water habitat would potentially be affected by the alignment. One of the emergent wetlands along the Crescent Harbor Road alignment is a large system (80+ acres) recognized by Washington Department of Fish & Wildlife as a State priority habitat. Adequate mitigation may be achieved through avoidance and minimization measures.
- All of the alignment along Fir Island Road lies within the 100-year floodplain, including the interchange at I-5. Compensatory flood storage would need to be provided for all area lost due to the project.

These impacts would present serious obstacles for obtaining permits.

- Construction would occur in designated shoreline areas. The Shoreline Master Programs of Skagit and Island Counties stipulate that roadway construction shall be located away from shoreline areas whenever feasible.

- Shorelines of Statewide Significance that would be affected include Skagit Bay marine shoreline of Skagit County, the Skagit Bay marine shoreline of Whidbey Island, and the South Fork of the Skagit River in the project vicinity. Shorelines of Statewide Significance are given higher priority for protection and preservation than other designated shoreline areas.

Bridge from Strawberry Point to North Stanwood Vicinity, via NW 300th

A detailed summary of expected impacts and costs of this alternative is presented in *SUMMARY OF FEASIBILITY MEASURES, Bridge from Strawberry Point to North Stanwood Vicinity*, (Appendix C).

Planning Level Construction Cost Estimate: $260.3 million including roadway, bridge, right of ways, and traffic mitigation. Operations and Maintenance costs for the project are estimated to be $1.417 million annually. Project level rate of return would range from 5.8 to 6.6%, which would not be attractive to investors.

Significant impacts are expected with this alternative on Federally listed threatened and endangered species as follows:

- Two salmon-accessible streams would be potentially affected by the alignment.
- Three bald eagle nests in three bald eagle territories are within 0.5 mile of the alignment.
- Two and one-half mile of estuarine habitat in Skagit Bay would be potentially affected by the alignment. These areas are recognized as important wintering and staging habitat for waterfowl, spawning/rearing habitat for threatened chinook salmon, proposed threatened bull trout, and as spawning/rearing habitat for herring and smelt.
- Of the 2.5 mile of estuarine habitat crossed by the bridge, approximately 0.3 mile are through eelgrass habitat; an important habitat critical for supporting several priority fish species and other marine life.
- These impacts would present serious obstacles for obtaining approval by the US Fish and Wildlife Service and National Marine Fisheries Service.
- At least 60 emergent and forested wetland areas and open water habitat would potentially be affected by the alignment. One of the emergent wetlands is a large system (80+ acres) recognized by Washington Department of Fish & Wildlife as a State priority habitat. Adequate mitigation may be achieved through avoidance and minimization measures.

These impacts would present serious obstacles for obtaining permits.

- Approximately 2.5 mile of new roadway would be located in shoreline areas under Snohomish County jurisdiction, including tidelands. Crossing of tidelands, shorelands, and marshes, bogs, or swamps for roads and railroads is prohibited by the County unless no viable upland alternative exists (Section 18, Snohomish County Shoreline Management Program).

- Construction would occur in designated Island County shoreline areas. The Island County Shoreline Master Programs stipulates that roadway construction shall be located away from shoreline areas whenever feasible.
- Shorelines of Statewide Significance that would be affected include the marine shoreline of Skagit County, Island County and Snohomish County in the project vicinity. Shorelines of Statewide Significance are given higher priority for protection and preservation than other designated shoreline areas.
- The bridge would cross commercial and tribal crab and fish harvesting areas.

Ferry Alternative from Whidbey Island to North Stanwood Vicinity

A detailed summary of expected impacts and costs of this alternative is presented in *SUMMARY OF FEASIBILITY MEASURES, Ferry Alternative from Whidbey Island to North Stanwood Vicinity,* (Appendix C).

Planning Level Construction Cost Estimate: Single ferry operation with landing at Strawberry Point - $221.7 million. Two ferry operation with landing at Oak Harbor or Coupeville - $297.7 million. These estimates include roadways, bridge/dock, right of ways, traffic mitigation, ferry vessel, and ferry terminals. Project level rate of return for ferry operations was not evaluated, since ferry revenues are not expected to cover annual ferry operating costs, much less repay the construction or capital costs of the alternatives.

National Historic District: The proposed Coupeville ferry terminal might impact the Ebey's Landing National Historical Reserve, which includes Coupeville and portions of Penn Cove. This would raise Section 4F issues and permitting is not expected to be obtained for this ferry terminal location.

Significant impacts are expected with this alternative on Federally listed threatened and endangered species as follows:

- For all ferry route alternatives, two salmon-bearing streams would be potentially affected.
- Three bald eagle nests in three bald eagle territories are within 0.5 mile of the alignment.
- A two and one-half mile of estuarine habitat in Skagit Bay would potentially be affected by the bridge/dock alignment. These areas are recognized as important wintering and staging habitat for waterfowl, spawning/rearing habitat for threatened chinook salmon, proposed threatened bull trout, and as spawning/rearing habitat for herring, and smelt.
- Of the 2.5 mile of estuarine habitat crossed by the bridge/dock, approximately 0.3 mile are through eelgrass habitat; an important habitat critical for supporting several priority fish species and other marine life. Eelgrass beds are considered to be irreplaceable and avoidance is the recommended mitigation.

These impacts would present serious obstacles for obtaining approval by the US Fish and Wildlife Service and National Marine Fisheries Service.

- At least 60 emergent and forested wetland areas and open water habitat would potentially be affected by the alignment. Adequate mitigation may be achieved through avoidance and minimization measures.

These impacts would present serious obstacles for obtaining permits.

- The 2.5 mile dock in the Stanwood vicinity would be located in intertidal wetlands in Snohomish County shoreline jurisdiction. These wetlands are designated and Priority Habitat by WDFW. Snohomish County shoreline regulations state "The location, design, construction and operation of boating facilities [including piers and docks] should endeavor to minimize any adverse affects on priority habitats, fish and shellfish resources, and the adjacent areas."
- Shorelines of Statewide Significance that could be affected include the Skagit Bay marine shoreline of Island County and Snohomish County in the project vicinity. Shorelines of Statewide Significance are given higher priority for protection and preservation than other designated shoreline areas.
- A ferry landing at Coupeville could adversely affect commercial and tribal shellfish harvest areas, depending on the location of the landing.
- Ferry traffic across Skagit Bay would cross fishing areas, potentially disrupt fishing activities, and could result in loss of fishing gear.

Next Steps for the SR 20 North Whidbey Island Access Feasibility Study

The Technical Committee at the November 1, 1999 meeting made a pending recommendation that all of the four alternatives evaluated are not feasible for implementation as vehicular capacity access to North Whidbey Island. This pending recommendation is based on rating of four of the five criteria for assessing feasibility of the alternatives. Attached is a summary of ratings, tabulated by McClure Consulting. More information on transportation performance was requested to complete the analysis and allow the committee, as a whole, to fully evaluate the criteria and measures of feasibility. It was agreed that each of the alternatives can be determined not feasible due to the potential for environmental impacts to critical areas and to habitat. In addition, the ferry alternative was considered to be not feasible due to the costs to implement and operate.

The next step for this study is to formalize the recommendation or conclusion that none of these four alternatives studied is feasible or worthy of further review and analysis. This recommendation would come from the project Technical Steering Committee to the project Policy Committee to be forwarded to the SIRTPO and Snohomish County Tomorrow Boards.

SR 20 North Whidbey Island Access Feasibility Study

CONSULTANT PROJECT TEAM

ATTACHMENT TO PROJECT ORGANIZATION CHART

Project Manager
Jean Mabry &
Mark Sinden

page one of summary of evaluation matrix

second page of summary of evaluation matrix

SR 20 North Whidbey Island Access Feasibility Study

Summary of Ratings:
Alternatives on Feasibility Criteria

November 1, 1999 Technical Committee Meeting

	North Bridge: La Conner		
Community Impacts	**All**	**TC**	**Exp**
Probably feasible	-	-	-
Serious impacts that could probably be mitigated	4	3	1
Probably not feasible	7	7	-
Land Use/Economic Development Impacts			
Probably feasible	-	-	-
Serious impacts that could probably be mitigated	5	4	1
Probably not feasible	6	5	1
Financial Performance			
Probably feasible	1	1	-
Serious impacts that could probably be mitigated	3	2	1
Probably not feasible	4	3	1
Environment: Critical Areas			
Probably feasible	-	-	-
Serious impacts that could probably be mitigated	2	1	1
Probably not feasible	10	7	3
Environment: Habitat			
Probably feasible	-	-	-
Serious impacts that could probably be mitigated	2	2	-
Probably not feasible	12	7	5

All = All Committee members who rated this item
TC = Rated item based on judgment as a member of the Technical Committee
Exp = Rated item based on professional expertise in this specific area

SR 20 North Whidbey Island Access Feasibility Study

Summary of Ratings:
Alternatives on Feasibility Criteria

November 1, 1999 Technical Committee Meeting

	Middle Bridge					
	Fakkema Road			Crescent Road		
Community Impacts	**All**	**TC**	**Exp**	**All**	**TC**	**Exp**
Probably feasible	2	1	1	-	-	-
Serious impacts that could probably be mitigated	5	5	-	6	5	1
Probably not feasible	2	2	-	3	3	-
Land Use/Economic Development Impacts						
Probably feasible	1	-	1	2	1	1
Serious impacts that could probably be mitigated	4	4	-	4	4	-
Probably not feasible	6	5	1	5	4	1
Financial Performance						
Probably feasible	3	2	1	3	2	1
Serious impacts that could probably be mitigated	3	2	-	2	2	-
Probably not feasible	3	2	1	3	2	1
Environment: Critical Areas						
Probably feasible	-	-	-	1	1	-
Serious impacts that could probably be mitigated	3	2	1	3	2	1
Probably not feasible	8	5	3	8	5	3
Environment: Habitat						
Probably feasible	-	-	-	1	1	-
Serious impacts that could probably be mitigated	4	3	1	3	2	1
Probably not feasible	10	6	4	10	6	4

All = All Committee members who rated this item
TC = Rated item based on judgment as a member of the Technical Committee
Exp = Rated item based on professional expertise in this specific area

SR 20 North Whidbey Island Access Feasibility Study

Summary of Ratings:
Alternatives on Feasibility Criteria

November 1, 1999 Technical Committee Meeting

	South Bridge: Stanwood Vicinity		
Community Impacts	**All**	**TC**	**Exp**
Probably feasible	2	1	1
Serious impacts that could probably be mitigated	5	5	-
Probably not feasible	3	3	-
Land Use/Economic Development Impacts			
Probably feasible	1	1	-
Serious impacts that could probably be mitigated	5	4	1
Probably not feasible	5	4	1
Financial Performance			
Probably feasible	1	1	-
Serious impacts that could probably be mitigated	4	3	1
Probably not feasible	3	2	1
Environment: Critical Areas			
Probably feasible	-	-	-
Serious impacts that could probably be mitigated	4	3	1
Probably not feasible	8	5	3
Environment: Habitat			
Probably feasible	-	-	-
Serious impacts that could probably be mitigated	2	2	-
Probably not feasible	12	7	5

All = All Committee members who rated this item
TC = Rated item based on judgment as a member of the Technical Committee
Exp = Rated item based on professional expertise in this specific area

SR 20 North Whidbey Island Access Feasibility Study

Summary of Ratings:
Alternatives on Feasibility Criteria

November 1, 1999 Technical Committee Meeting

	Ferry Options								
	Strawberry Point			Oak Harbor			Coupeville		
Community Impacts	**All**	**TC**	**Exp**	**All**	**TC**	**Exp**	**All**	**TC**	**Exp**
Probably feasible	6	5	1	5	4	1	3	3	-
Serious impacts that could probably be mitigated	2	2	-	3	3	-	3	2	1
Probably not feasible	1	1	-	1	1	-	3	3	-
Land Use/Economic Development Impacts									
Probably feasible	3	2	1	3	2	1	3	2	1
Serious impacts that could probably be mitigated	6	6	-	5	5	-	4	4	-
Probably not feasible	2	1	1	2	1	1	3	2	1
Financial Performance									
Probably feasible	-	-	-	-	-	-	-	-	-
Serious impacts that could probably be mitigated	2	2	-	1	1	-	-	-	-
Probably not feasible	6	4	2	7	5	2	8	6	2
Environment: Critical Areas									
Probably feasible	-	-	-	-	-	-	-	-	-
Serious impacts that could probably be mitigated	4	3	1	5	4	1	5	4	1
Probably not feasible	8	5	3	7	4	3	7	4	3
Environment: Habitat									
Probably feasible	-	-	-	-	-	-	-	-	-
Serious impacts that could probably be mitigated	1	1	-	1	1	-	1	1	-
Probably not feasible	12	7	5	12	7	5	12	7	5

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